

ABSTRACT OF THE DISCLOSURE

A network device including at least one network port, a clock, address resolution (ARL) tables, and address resolution logic. The at least one network port is configured to send and receive a data packet. The clock is for generating a timing signal. The ARL tables are configured to store and maintain data related to port addresses of the network device. The address resolution logic is coupled to the ARL tables and configured to perform a search and an update to data into the ARL tables based on the data packet, to calculate a current range of the search, to determine an intended result of the update, and to block the update when the intended result will move data out of the current range of the search, the search and the update being performed concurrently during alternating slots of the timing signal.